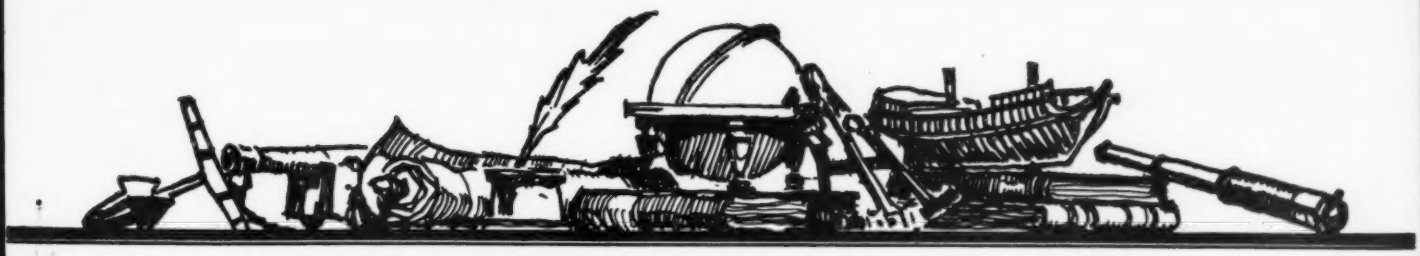

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Courtesy of Robert B. Applebee

The Thomas W. Lawson

THE LAST VOYAGE OF THE THOMAS W. LAWSON

by

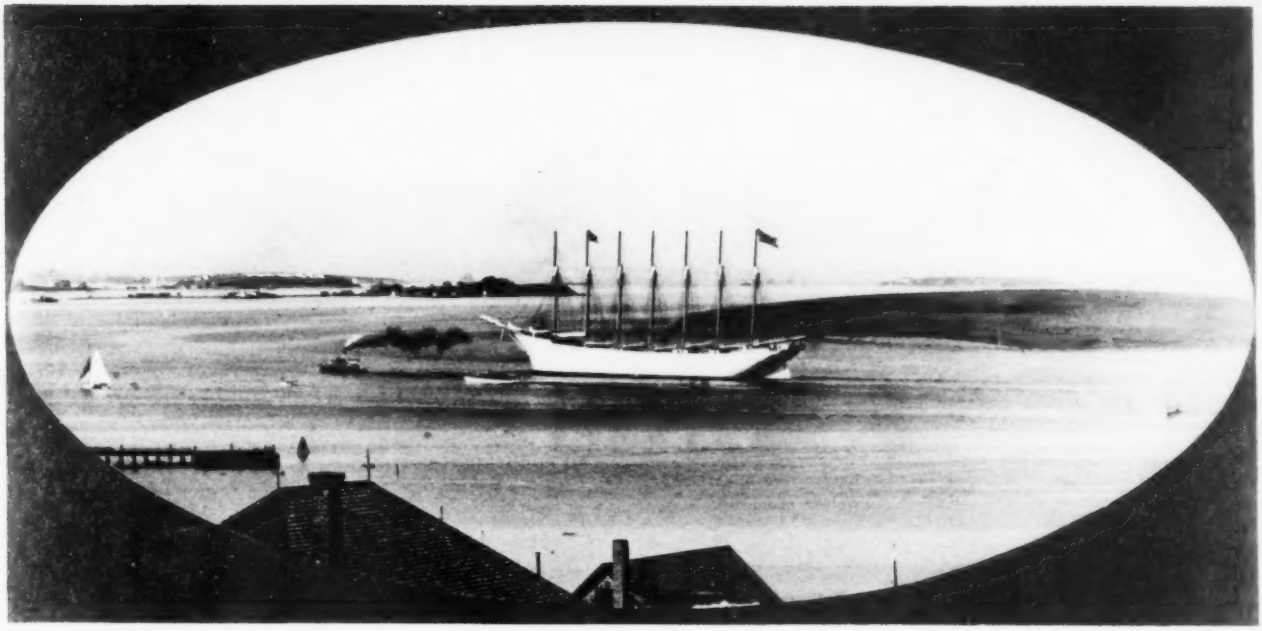
Thomas Hornsby

Just a half-century ago, in the year 1902, the Fore River Shipbuilding Company of Quincy, Massachusetts, built the first, and what proved to be the last seven masted schooner in the world. Two years previously, the first six master, the GEORGE W. WELLS, had been built in Camden, Maine. She was an extremely large and well built vessel, but the LAWSON was to far outstrip her both in length and registered tonnage. There is a definite economical advantage in the operation of a large vessel over one of smaller size; fixed charges remain largely the same, while the greater carrying capacity of the larger vessel reduces other costs in proportion. The long and interesting era of sail, with its many changes, was at the time passing into the final phase, but there were men of that day, who believed that a modern type of sailing vessel could be built that could halt the threat of encroaching steam, and operate at a profit. A steel vessel with no danger of fire, no seams to caulk, no splintered and crashing spars, no expensive overhauls to repair damaged planking! A vessel such as the THOMAS W. LAWSON was to be! The annual report of the Commissioner of Navigation for the year 1902, states the case in one brief sentence, "The building of full-rigged wooden ships has ended in the United States, and the change from wood to steel in the construction of large schooners has begun."

The pertinent statistics of the LAWSON will be included in a separate grouping at the end of this article, for the information of those they will benefit, for statistics at best are dull things, and they could never present a true picture of the LAWSON - for here was a sailing vessel of heroic size, built in a modern steel shipyard, with a carrying capacity of 8000 to 9000 tons, her hull over 400 feet in length, and almost 500 feet from tip to tip. She was built of steel, with steel decks, steel masts, and an enclosed steel deck house to protect her helm, her steel spike bowsprit measured 85 feet in length, while the weight of each of her seven lower masts was almost 20 tons. Altogether the largest and strongest sailing vessel ever built in the United States.

The keel was laid in the winter of 1901, and her machinery was installed while still on the stocks and made ready for operation. Her seven lower masts were stepped before the launch, starting with the aftermost one, and assisted by the power of her own steam winches, the 32 inch masts were placed one by one. There were three holds, that is three complete decks, besides the poop and forecastle deck. A double bottom 4 feet deep was designed to hold 1000 tons of water ballast, intended to make her ride comfortably and be easily handled; access to this was by means of a pump well, so that at any time a man could enter this for inspection. There were 4 steam pumps, two of which working together could pump 6 tons of water per minute, or discharge her entire water ballast in $2\frac{1}{2}$ hours. The steam power for the operation of these pumps and her other machinery was furnished by vertical boilers, 56 inches in diameter by 90 inches high, one in the forward house and one in the after. A double cylinder ship engine in the forward house was equipped with friction drum and winch heads on an extended drum shaft on the outer end. Along the center line of the vessel were placed six stationary hoisting engines, to be used in working ship, and to raise and lower her sails. These were 8 feet square, had link motion, and on each end of their drum shafts were large galvanized iron winch heads. The windlass used for hoisting the 10,000 lb. stockless anchors was forward under the forecastle deck, and was of the Hyde pump-brake type with double geared messenger attachment and iron bitts. The wildcats were fitted for 2 3/4 inch chain; the windlass was rated at 350 h.p. Nearby was a 40 h.p. engine, which by a messenger chain operated a "nigger head" on deck. It is very likely that this was her towing engine, and used for hauling in her cable tow.

Steam steering was also arranged for the LAWSON, by the installation of a 90 h.p. Hyde pattern steering gear - this acted by means of a worm on a shaft, which had a right and left hand screw thread, with one nut attached to starboard end of rudder crosshead and the other to port. Telephone communication ran between the wheel house and both engine rooms. All machinery was arranged so that it could be operated by only two engineers. Installed in the forward engine room was a dynamo to supply lights throughout the ship, and from this room also came the steam heat for the cabins and crew's quarters - revolutionary features for a windjammer.



The LAWSON took three months to fit out, and on the 8 September she towed to her anchorage off South Boston. Let us take a good look at her appearance - her under water body was painted a dark red, from her bottom paint to her rails the hull was a light steel gray, inside of rails and bulwarks white, the houses white with their tops of green. The deck was hard pine over steel, bright varnished. The lower masts of steel, each 135 feet long, were painted yellow, and circled by mast hoops of iron, booms and gaffs were scraped and oiled, wood color. The pine topmasts, each 58 feet long, were scraped and slushed with grease; the topmast heads stood 155 feet from the deck.

The design of the LAWSON was furnished by B. B. Crowinshield of Boston, a noted yacht and ship designer, and a competitor of the celebrated Herreshoff. He is credited with designing the WILLIAM L. DOUGLAS, MERTIE B. CROWLEY, GEORGE W. WELLS, and the MARGARET HASKELL among others. Chiefly responsible for the building and inspiration of this immense schooner was Capt. John F. Crowley of Boston, one of the "Crowley Boys", and at the time head of the Coastwise Transportation Company. Active in the company, and among its largest investors was Thomas W. Lawson, who later became president of the Bay State Gas Co. The vessel was named for him because of his interests, and when this was assured he took a somewhat more active interest in the building and design of his namesake. One of his suggestions was that the schooner should have only six masts instead of seven, an idea that did not at all meet with Crowley's thoughts on the matter. Crowley insisted on building the schooner as planned, since he already had the six master DOUGLAS building in the same yard at the time. One dark morning in March, Lawson woke up early and started thinking about the seven masts, idly wondering what time it was, he reached for his repeating watch and pressed the lever for the time. The watch struck six, whereupon Lawson took this for an omen - he lay in bed no longer, but jumping out he ran for the phone and called Crowley, telling him that the schooner must be a six master. Crowley's remarks are unfortunately not a matter of record, but he told him not to wake him up again about the number of masts.

The names of these masts have caused an endless amount of speculation, with the result that many fanciful stories have arisen - the most common being that the masts were named after the days of the week. It is true however, that while working ship, the masts were often referred to by number. This was made necessary by the fact that the schooner often carried new hands every trip, so that the numbering was used to avoid confusion. Arthur Crowley, her first master, was asked shortly before he died what he called the masts. He answered, "I called them, Fore, Main, Mizzen, After Mizzen, Jigger, Driver, and Spanker." Engineer Rowe, the only living survivor of the wreck, refers to them as - Fore, Main, Mizzen, Jigger, Pusher, Forcer, and Spanker. Axel Larsen, her first mate for several trips, recalls them as - Fore, Main, Mizzen, Jigger, Driver, Chaser, and Spanker.

But whatever the correct nomenclature of the seven masts, they made her the most easily recognized sailing ship ever built.

The sailing qualities of the LAWSON are less easily determined. It has been said of her, that she was a handy vessel, well balanced, and not too hard to handle, but such a large ship under sail was sure to have some pecularities, one of which was that, with her high bow, it was often impossible to tack ship and she was forced to wear around or anchor. She handled much better loaded, than light; the wind was apt to take effect on her high sides and at such times she became very much of a problem. Very high bulwarks kept her deck dry, even in exceptionally bad weather. Once while under tow of a large tug, she was cast loose during a hurricane off the coast of Florida but made the Delaware Bay in fine shape, while the tug limped in badly battered. It was designed that in hoisting and trimming sail, that all the work should be done by the forward and after engines. The halyards from the three forward masts, and for the fore staysail and jibs led to the forward winch, while the halyards from the four after masts led to the after winch. The peak and throat halyards, jib halyards, topsail halyards, topping lifts, and sheets were trained through lead blocks in a line with the shrouds, and then led through snatch blocks to the winch heads. The spencers were hoisted by throat halyards with a four fold block at the mast head, and a triple halyard becket. The peak halyards had one double and two single blocks at the mast head, and four single blocks on the gaff. Two of her sails could be hoisted at the same time; the throat halyards were led to the port, and the peak halyards to the starboard winch heads. Her suit of sails, consisted of 7 spencers, 7 topsails, 6 topmast staysails, fore staysail, main jib, flying jib, jib topsail, and what might be called a jib-o-jib. She carried in addition 5 storm staysails. The topmast staysails were some times used in her early career, but in her later service as a tanker, not at all. The full suit had a sail area of about 43,000 square feet. The foremast was supported by five 4 3/4 inch steel wire shrouds, but only four were given to each of the other masts. The forestay was double, there were two knighthead stays, and two jib stays, and each was of the same 4 3/4 inch wire strand. The total breaking strain was estimated at 200 tons.

After towing up to Boston harbor from Quincy, the LAWSON went into the coastwise coal carrying trade under the command of Captain Arthur Crowley, the brother of John, who headed the Coastwise Co. Much of this trade was carried on between the Chesapeake and Delaware to Boston. It is recorded that once she carried 9000 tons of coal from Newport News to her home port. The six engines which had been placed on her deck, were each forward of a hatch, and forward of each engine was a mast to which a spar could be rigged for hoisting purposes. It was possible for her to work all six hatches at one time, a great help in the quick discharge of such a large cargo. The LAWSON grounded several times in this coast trade, and it began to be recognized that she was unfit for coastwise service. Crowley left her, and Emmons Babbitt took command, she stayed in the coal trade - there were those who thought her top heavy, and not a safe vessel. Despite her sometimes adverse criticism, and the fact that her sailing qualities were often questioned, she did not prove a financial failure. She had cost upwards of $250,000 to build, but she was capable of yielding a return of about $75,000 per year. However reluctantly, she was paying her way.

In 1906 she was converted into a oil tanker by the Newport News Shipbuilding Co. Wooden bulkheads were installed throughout her hold, and during a water test of this installation, the bulkheads leaked and the big schooner started to roll over. Only her wire spring lines held her until the water could be pumped out. After this conversion she went into the bulk oil trade between Port Arthur, Texas, and Marcus Hook, Pa. She was now under lease to the Sun Oil Company for a period of five years, her master at this time was Elliot Gardner. In Sabine Pass, Texas, while loading oil, she suddenly rolled over. Great difficulty was experienced in righting the vessel, and wrong ballasting was blamed for the damage, but it is possible that the wooden bulkheads which were continually leaking were again at fault. The LAWSON sailed but little in this trade, and was invariably under the tow of the large tug PAUL JONES.

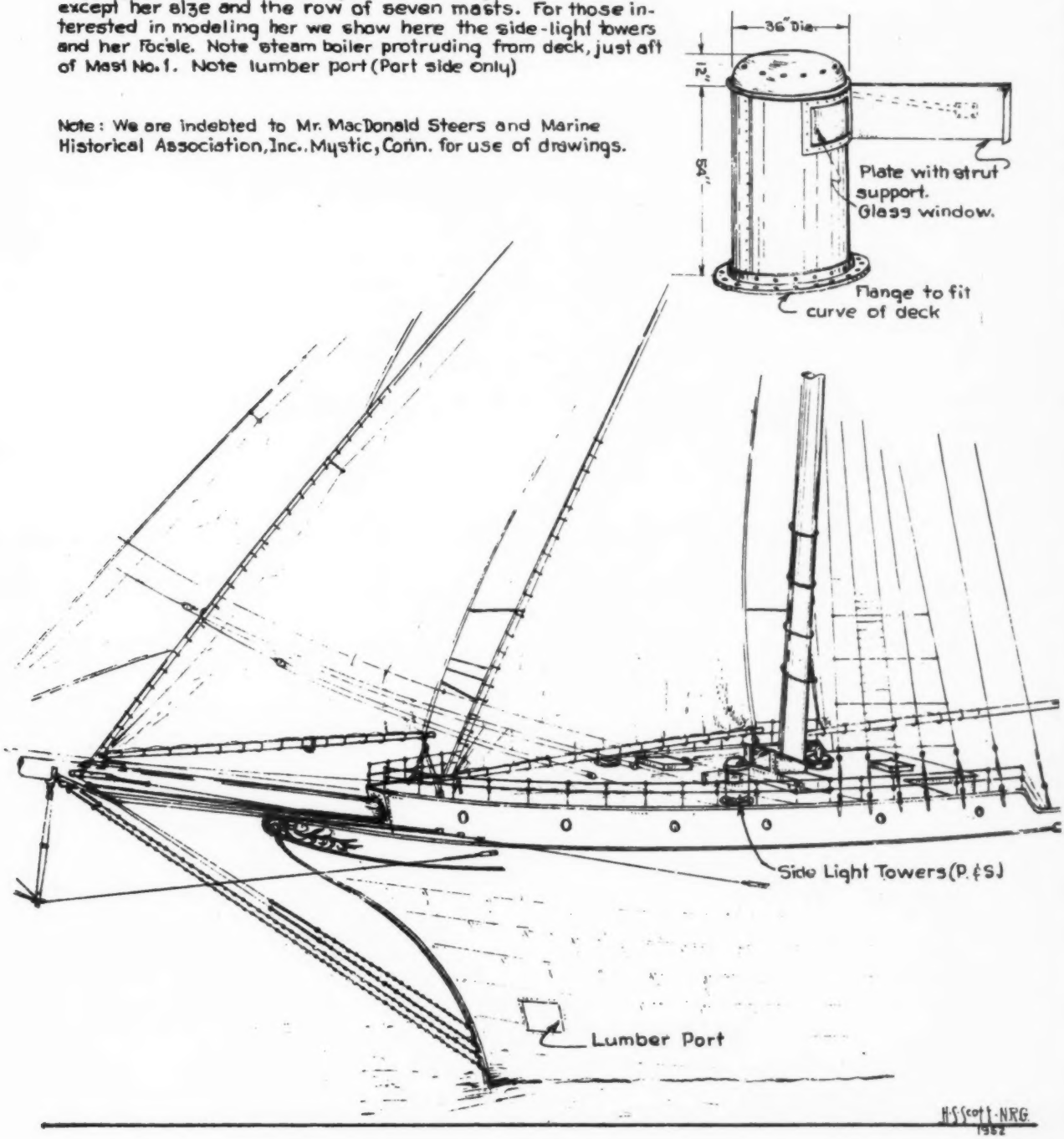
In the fall of 1907 she was in the Delaware, when she was put under charter to the Standard Oil Company, for what was to be the first transatlantic voyage of her career. She was to make the attempt to carry oil across the ocean because of the prohibitory rates then being asked by the tank steamer owners.

FOCS'LE. - "THOMAS W. LAWSON"

FROM STUDY OF ORIGINAL DRAWINGS - BY H.S.SCOTT FOR N.R.G.

Nothing unusual meets the eye from drawings of the Lawson except her size and the row of seven masts. For those interested in modeling her we show here the side-light towers and her Focsle. Note steam boiler protruding from deck, just aft of Mast No. 1. Note lumber port (Port side only)

Note: We are indebted to Mr. MacDonald Steers and Marine Historical Association, Inc., Mystic, Conn. for use of drawings.



George W. Dow, a native of Hancock, Maine, was engaged as her new master. He was an experienced and capable seaman, and sailed most all of his life for the John S. Emery Company of Boston, Mass. For many years he had been master of the bark AUBURNDALE. When he got the command of the LAWSON, he wanted a young man by the name of Libby to go with him as his Chief Mate. Libby was somewhat in Dow's debt, for he had shipped in the AUBURNDALE, and with Dow's help had risen to be Mate, but he had left the sea, was married, and had a good position with Armour & Co. in Boston. He was reluctant to go, accepted only because of what he felt he owed to Dow - his act of gratitude to his benefactor was to cost him his life. He and the second mate Crocker reported aboard 4 November at Philadelphia.

During the next ten days the schooner loaded her cargo of 2003063 gallons of oil, valued at $71,000 and engaged in shipping the remainder of her crew of eighteen men. This was a queer mixture of nationalities; besides the native Americans, were Danes, Swedes, Englishmen, a German, a Russian, an Austrian, and one from South America.

On 15 November, Capt. Dow came to what is now the Old Custom House on Chestnut Street, and changed the LAWSON from Permanent Enrollment #1, issued at Boston 7/2/1906 to a Temporary Register to proceed in the foreign trade. He listed the owners of the vessel as: Coastwise Transp. Co. 61/64; C. H. Delano, Taunton 1/128; Emily W. R. Bullard, New Bedford 1/128; Geo. A. VonLingen, Balt. 1/64; Arthur Orr, Chicago 1/64. While Dow was clearing his ship and depositing his papers, six of his seamen became dissatisfied and taking advantage of the captain's absence, quit the ship. The Wiklund brothers from Sweden, Burgess, a state of Mainer, O'Brien of Dublin, Edwards of the Barbadoes, and Smith from Yarmouth decided they would not make the voyage. Six more seamen were hurriedly signed on in their places after the ship had cleared. It was a true pier head jump - but it was a jump straight to their deaths. The average age of the crew was 28½ years, their pay $30 per month. Libby as the Chief Mate signed on at $80 per month; patiently waiting for him back in Marlboro, Mass. was his wife Annie and their family of five children.

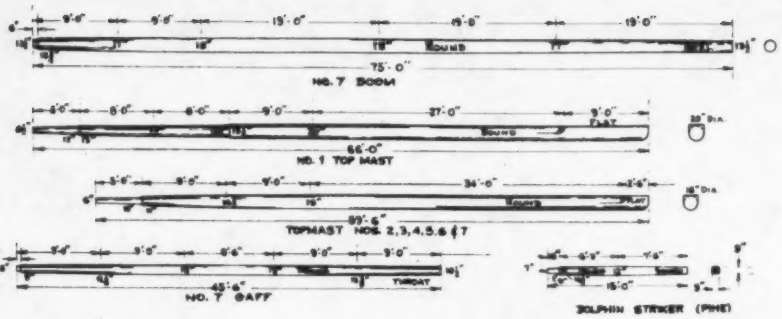
The next day the LAWSON towed down to the Delaware Capes in charge of the PARAGUAY, cast off her tow and fixed her course for the winter seas of the North Atlantic. Off the Grand Banks of Newfoundland, she sailed into a terrific storm, gradually losing most of her sails under winds of 80 to 90 miles an hour velocity. The gales continued unabated, in a few days she was down to bare poles and all her lifeboats had been swept away. Observations were of course impossible, the schooner continued eastward, the wind pushing against her huge hull and spars. Dow had no certain idea of their position.

On the afternoon of 13 December, they came to anchor off one of the Scilly Isles, letting go both anchors and about 150 tons of chain on each. Heavy surf could be heard breaking on rocks in the vicinity.

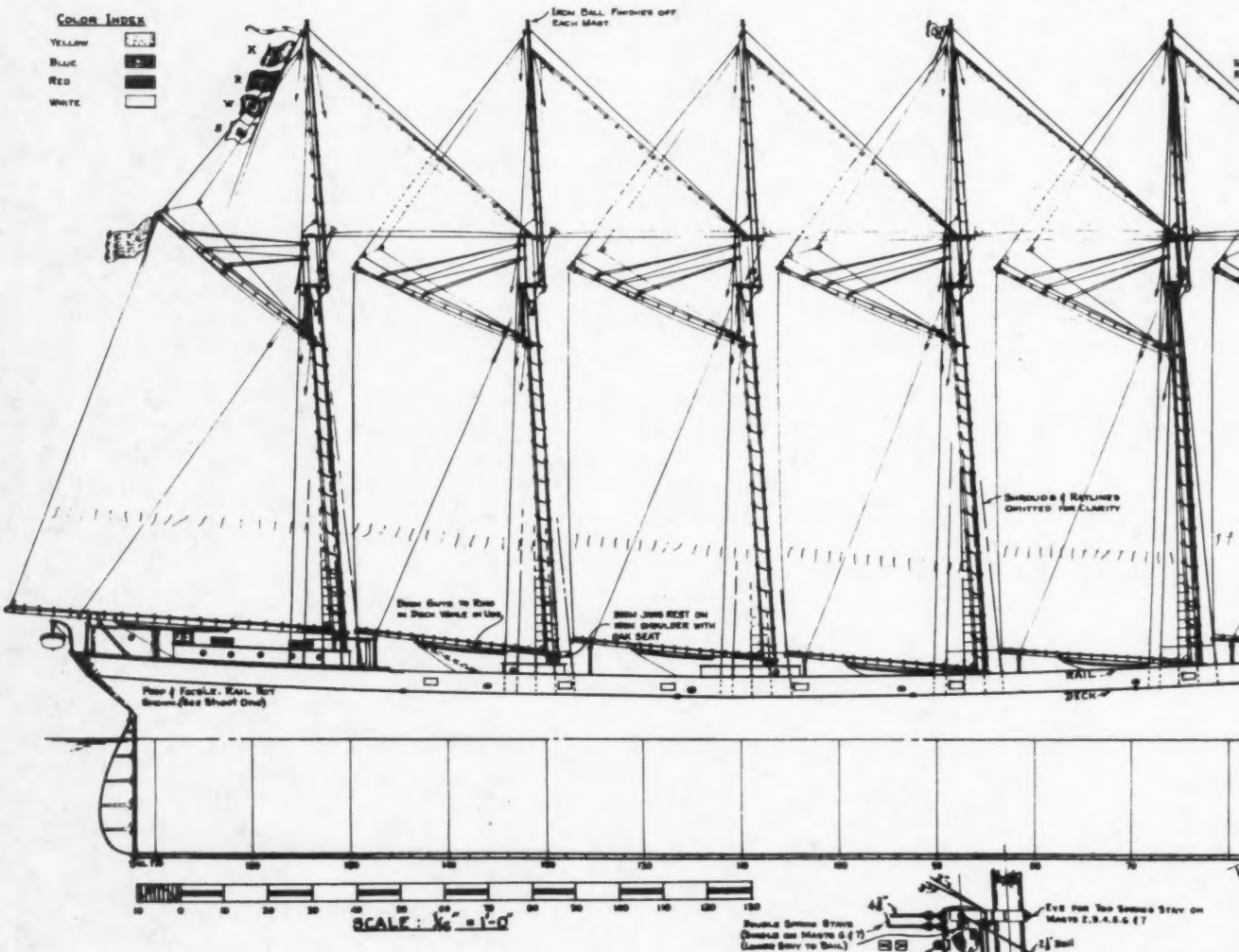
The Scilly Islands are located off the southwest coast of England, opposite Cornwall, they lie 30 miles W.S.W. of Land's End, and are composed of about 140 islets and inumerable rocks jutting from the sea. Hughtown is the capital, and is situated on the island of St. Mary, which has a good harbor. The island of St. Agnes, is the southern most of the group, contained a lighthouse, and at the time of which I write, had a population of about 250 people. The principal occupation of the inhabitants is in the fishing trade, and they are skilled as boatmen in the open sea.

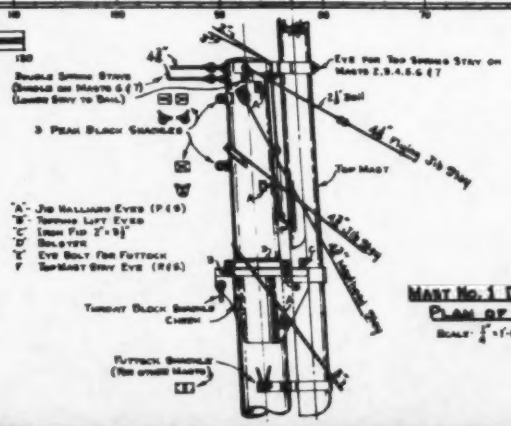
For about an hour the anchors held, then the port chain parted, and the starboard anchor began to drag. The LAWSON sounded signals of distress which were heard at the Bishop Rock lighthouse shortly after 4 o'clock. Two lifeboats put out at once, the St. Mary's boat ran so close that she was dismasted against the side of the schooner, and Mr. W. C. Hicks, a Trinity pilot managed to scramble aboard, where he was forced to remain. The St. Mary's boat turned about and put back, with the intention of telegraphing for a tug. The St. Agnes boat stood by the schooner until her crew, exhausted by the cold and exposure was forced to return. The LAWSON was in extreme danger, and all aboard her knew it - the day was FRIDAY THE THIRTEENTH!

At last the pilot Hicks turned to Captain Dow, "You haven't a chance now, you are

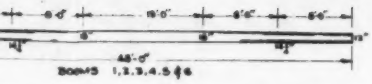


WOOD SPARS FOR 7 MAST SCHOONER
SCALE : 1/4"=1'-0"
(SEE SHEET ONE FOR MASTS)

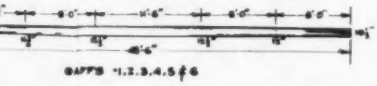




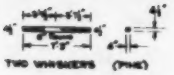
MAST No. 1 DO
PLAN OF TO
SCALE: 1/4"=1'-0"



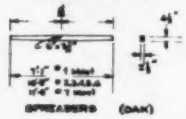
BOOMS 1.2.3.4.5 & 6



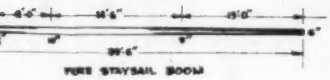
GAFFS 1.2.3.4.5 & 6



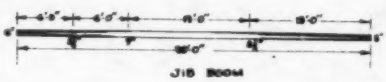
TWO WHISKERS (PINE)



SPREADERS (OAK)

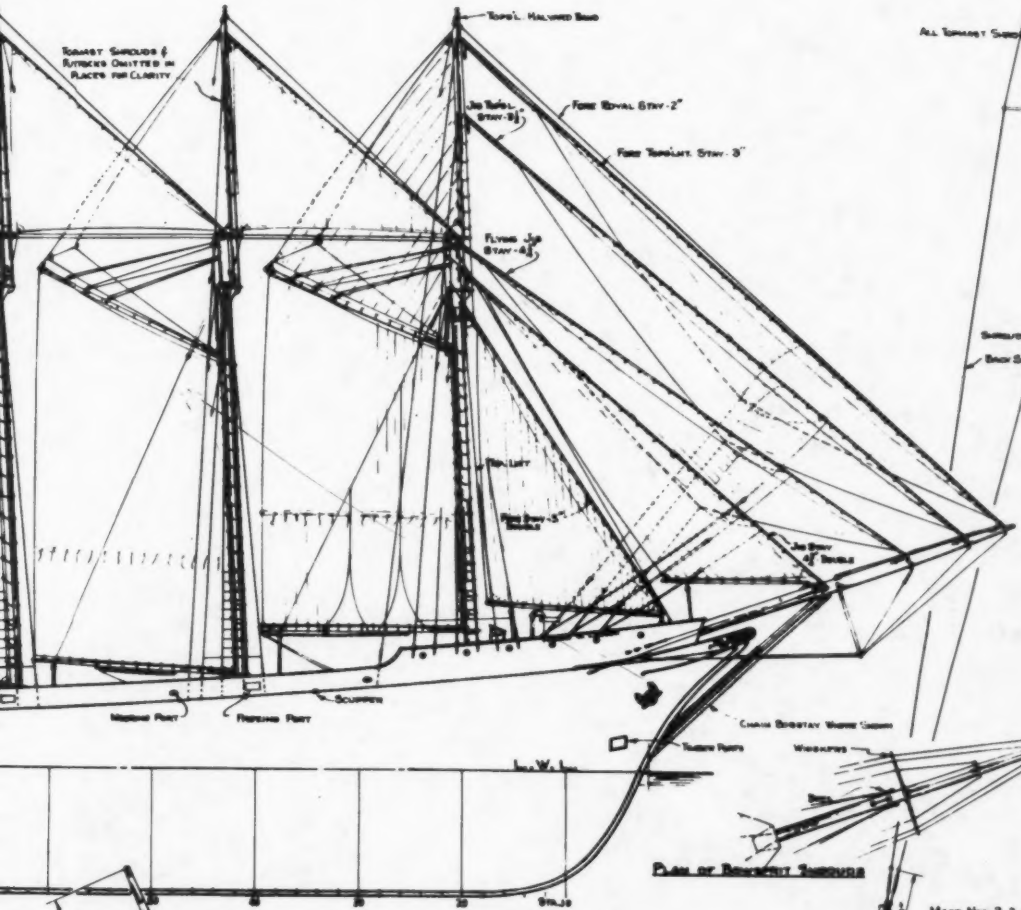


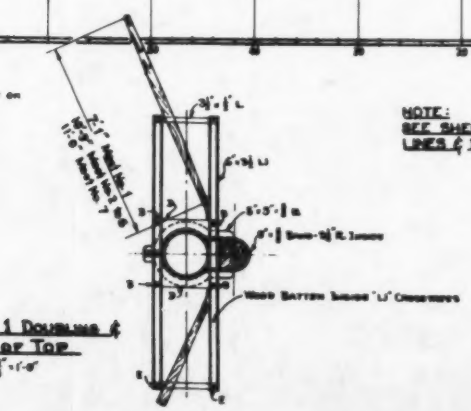
FORE STAYSAIL BOOM



JIB BOOM

ER


Topmast Shrouds & Ratlines Omitted in Places for Clarity
Fore Royal Stay - 2"
Fore Topgallt. Stay - 3"
Flying Jib Stay - 4"
Scupper
Mainmast Point
Foremast Point



1 Doubling &
ar Top
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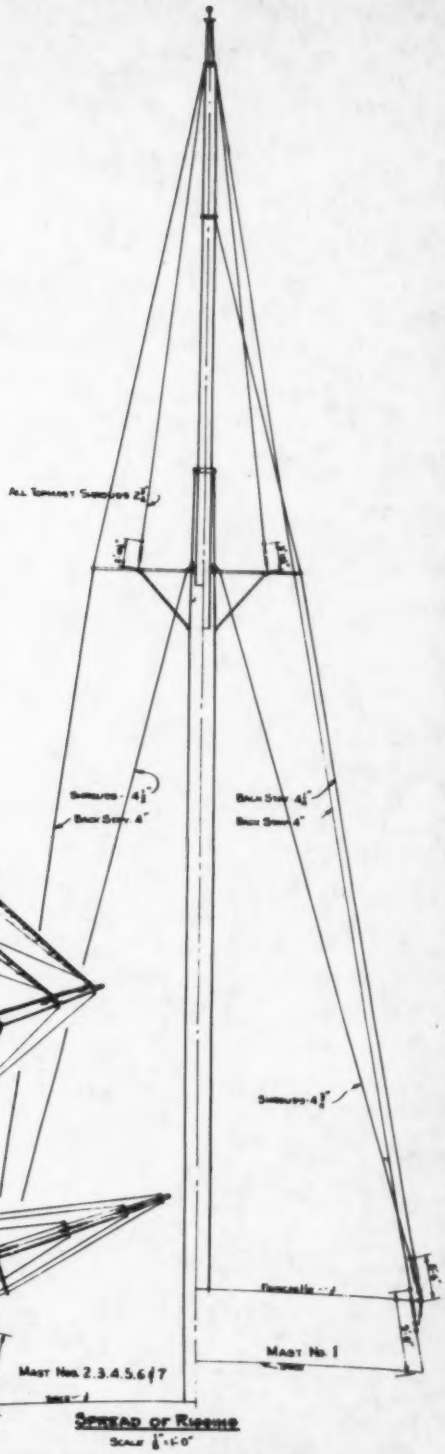
NOTE:
SEE SHEET NO. ONE FOR LINES & DECK PLAN.



Spread of Rigging
Scale 1" = 1'-0"

Plan of Boomkin Shrouds

SCHOONER - THOMAS W. LAWSON

RIGGING & DETAILS
FROM ORIGINAL BUILDERS PLANS

BUILDERS PLANS LOANED TO NAUTICAL RESEARCH GUILD THROUGH COURTESY OF MARINE HISTORICAL ASSOCIATION, INC., MYSTIC, CONN. AND THE BETHLEHEM SHIPBUILDING CORP., QUINCY. PLANS SHOWN AS FORE RIVER SHIP & ENGINE CO., HULL NO. 110, APPROVED BY : B.B. CROWNINSHIELD, N.A.

THESE PLANS DRAWN BY H.S.SCOTT, N.R.G. DRAFTSMAN, WITH SUGGESTIONS & HELP FROM THOMAS HORNSBY, N.R.G.

SCALE, UNLESS OTHERWISE NOTED: ½" = 1'-0" 1-17-1953

SHEET NO. TWO OF TWO

going to hit." The LAWSON at about 1 A.M., 14 December, hit Hellweather Reef - she went into it broadside - breaking in two almost immediately between the sixth and seventh masts. Most of the crew wearing lifejackets were in the rigging when she struck, both sections rolled over and went down fast into deep water. On the after section were Capt. Dow, the pilot Hicks, and one or two others. Dow, the deck engineer Rowe, and an English seaman named Allen were thrown clear; Hicks, who had lashed himself to the rigging, became entangled and went down with the wreck. The lifeboats were again launched, and used every exertion in the search for survivors. Fred Cocke Hicks, the son of the pilot, went out in the rescue attempt in frantic search for his father. Fifteen hours later Dow and Rowe were rescued from the rocks of the island of Annet, where they had been thrown by the heavy seas. Both were injured, Rowe with a broken kneecap, and Dow with a broken arm and smashed ribs, both suffered from the cold and exposure of the storm and their immersion in the water. One other survivor escaped the wreckage, Allen the English seaman, whose home was in Battersea, lived until Sunday afternoon when he died in intense agony, his side horribly split open. Fourteen bodies were recovered from the wreck, and they all lie buried on St. Agnes.

No salvage of the schooner was possible, and the wreck was abandoned as a total loss. The wooden bulkheads had broken apart at the time of stranding, and the oil thrown into the sea, had covered rescuers and rescued alike. The loss to Lawson and his family was estimated at $150,000, not insured. The records of the Atlantic Mutual Insurance Co. New York, indicate the cargo was insured at Lloyds for $90,000 and that some of the individual owners were likewise insured for their own account.

For those who believe in the fate of numbers, the case of the LAWSON should have some special significance - the lucky number of her 7 masts kept her profitable and protected until the year 1907, but the foreboding influence of the 13 letters in her name coupled with the peril in which she found herself on that Friday the 13th, proved a handicap she could not overcome. The financier for whom she was named, wrote as her epitaph, "She was the grandest seabird that ever floated". He also wrote by some quirk of fate a book entitled, "FIRDAY THE THIRTEENTH", the title being the very day that his namesake came to her doom, and the date of publication of the book was the year 1907, the same year as her loss! Truly, as strange and amazing coincidence as ever had been connected with the sea.

THOMAS W. LAWSON

Built: Quincy, Mass.	Gross: 5218 tons
Launched: 7/10/1902	Net: 4914 "
Length: 375.6	Number:145943
Breadth: 50.0	Signals: K.R.W.S.
Depth: 22.9	Home Port: Boston, Mass.
Draft: 26.5	Crew: 16 to 18 men.
Rig: 7 masted schooner	Lost: 14 December 1907

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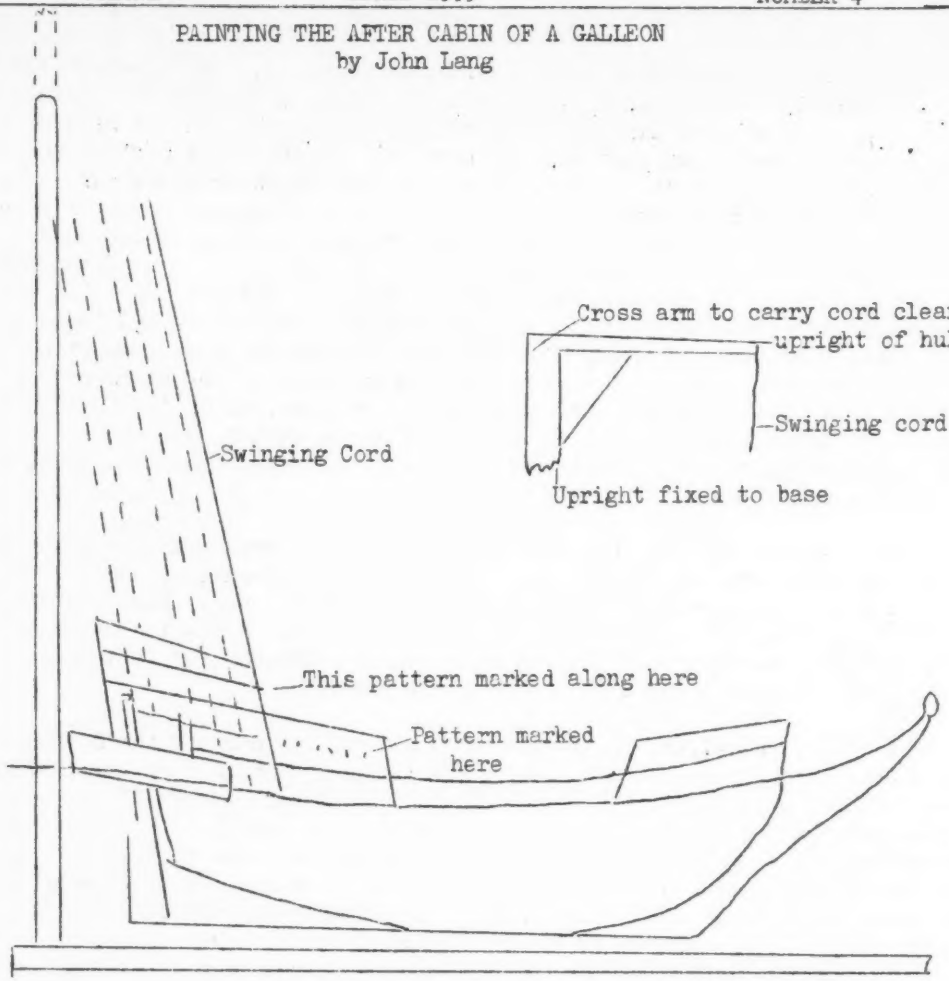
Annual Report Com. of Navigation	Philadelphia Public Ledger
Custom House documents, Phila., Pa.	Lippincott's Gazetteer
Maine Coast Fisherman	Merchant Vessels United States
Telegraphic Reports from Hughtown	Phila. Inquirer

We are grateful to Robert B. Applebee for the pictures of the LAWSON.

The hull lines of the LAWSON will be sent at cost of reproduction which is roughly $2.50. Write Herbert S. Scott, 2300 22nd St., N.E., Oklahoma City, Oklahoma. The schooner was so long it had to be drawn 1/8" scale which makes the drawings about 4' long.

PAINTING THE AFTER CABIN OF A GALLEON

by John Lang


Cross arm to carry cord clear of upright of hull
Swinging cord
Upright fixed to base
Swinging Cord
This pattern marked along here
Pattern marked here

When working out the chequered pattern of the sides of the after cabins, mark the areas to be painted and coat them up solidly with white paint. Instead of marking in the pattern with black lead, use sharp knife with a fine point and scribe faint lines. The very slight burr thrown up by the knife will be sufficient guide for the brush. When marking out the GOLDEN HIND which was fixed to a base board. I erected an upright rod of a length that was sufficient to give a decent swing. A line tied to this so that it will come in line with the stern work and then swing forward to be in line with the forward bulkheads of the after cabins. The width of each section was marked along the middle of the two bands and then the line was swung to touch these points and the paint line was scribed along the cord. This means the shapes were not rectangular or true parallograms but that they all radiate from a common center. This give a better appearance to the finished pattern than having odd panels at the ends. I have made a rough sketch to try to explain this more clearly.

VINTAGE 230 B. C.

From the "Lookout" of the Seaman's Church Institute. A ship sunk 230 B.C. with a cargo of wines put up in jugs at least 2100 years ago, is being raised from its centuries old grave at the bottom of the Mediterranean, off southern France. Believed to be the oldest cargo ship yet discovered, divers observations set her length at 110 feet and her displacement at 600 tons. Marking on some of her recovered wine jugs indicate she was owned by a citizen of Greece, one Marcus Sestius, and her home port was Delos, an island in the Aegean Sea. The team of archaeologists and salvagers, under the direction of J.Y. Cousteau of the French Navy, hope to raise the vessel by spring. After clearing her holds of cargo and mud, Cousteau declared that a replica would then be built.

A Guild Member Sailed in the LAWSON
A letter from Captain S. C. Sullivan

It has been quite a long time since I sailed on the LAWSON - a half century or more - I do not remember too much about her. I made the first two trips on her under sail, and then she changed to a colored crew and towed her up and down the Coast.

If I remember correctly, she was rather a clumsy craft -- for instance, going before a fair wind - that is from aft - we would change her course about four points on either side of our true course about every two hours so that all the sails would draw. The sails were handled with steam winches, which were something new in those days.

She was in the coal trade between Boston, Philadelphia and Sparrow's Point, Maryland. She carried twelve A.B's.

That is about all I can tell you personally about the THOMAS W. LAWSON - sorry I cannot tell you more. I will be very pleased to see her lines and sail plan.

THE THOMAS W. LAWSON
The Draftsman's Viewpoint
by Herbert S. Scott

I agreed to draw up the body lines and sail plan of the LAWSON, little knowing what it entailed. A large box arrived from the Mystic Marine Association, Mystic, Conn., which proved to be sixty-six large drawings, original builder's plans, drawn in 1902. It turned out that many of the plans were missing, including the most important ones. There were no half breadths of water lines, so the half breadths of stringer drawings were used. The final drawing has no waterlines except L.W.L. and stringer and deck lines. The body lines drawing is about complete as to deck fittings, hatches, breaks of poop and forecastle and bulwarks. Mr. Thomas Hornsby furnished valuable information on deck engines and other details. Nothing went into the drawing unless it could be proven by builder's drawing or some reliable source. The actual body lines are as good as could be obtained from our sources. If the Guild model makers can get their ships as close as the drawing they will have no trouble.

Rigging and Sail Plan. The rigging plan is another story -- from her spar drawings and sail plan I was able to obtain location of every piece of iron work pertaining to rigging. Each drawing of her sticks is exact. Enlarged detail of mast doublings show all fittings found and are to exact scale. Note particularly that foot of topmast on No. 1 extends further down from cap than do the others. Lead of rigging is not shown as this is more or less standard and we do not have the belaying pin plan. Much of it, of course, leads to deck engines. (See article of Mr. Hornsby). Mr. Harold A. Underhill in his book "Sailing Ships and Rigging" has sail plan of the LAWSON which he has constructed from original builders sail and spar plan. His drawing shows three blocks on each gaff and three blocks on the mast-head. The whereabouts of these drawings is not known, perhaps lost with the many other drawings. Mr. Hornsby suggests that the fourth block was used as the beginning of the hallyard. Others stated that she had only three blocks on the gaff. This is all open to argument and I have shown only three blocks on the gaff and one on the lead.

I am indebted to Mr. B. MacDonald Steers, Mr. Harold A. Underhill and Mr. Thomas Hornsby in the drawing of the LAWSON'S lines and sail plan. I feel satisfied that the drawings are as near right as they can be with the information at hand.

This is entirely a Guild project. Let us not forget Mr. B. B. Crowinshield who designed the LAWSON and who incorporated her story in his good book "Fore and Afters".

Note: It will be seen that scale of the drawing of the sail plan shows 1/16 in. equals 1'0". This must be disregarded due to the fact that we had to photostat down to fit sheet size of Journal. Use the scale bar only.

EXPLORATION OF HISTORIC SHIPWRECK SITES
From the Smithsonian Institution

The Smithsonian Institution, through its Division of Naval History, U. S. National Museum, is conducting exploration of historic shipwreck sites in Florida waters. The program includes surveys and charting of the sites; recovery of materials from them; preservation, study, and exhibition of these materials, and publication of findings. The work is being carried on under a grant of funds by E. A. Link, of the Link Aviation Corporation, who is participating in the operations with his boat the "Sea Diver". Part of the work in certain areas will be done in cooperation with Arthur McKee, of Homestead, Fla.

The interest of the National Museum in this field of work began in 1951. In late May and early June of that year an expedition sponsored by Dr. George Crile, Jr., of Cleveland, H. J. Rand of Cleveland, E. A. Link, of Binghamton, N. Y., and John Shaheen, of New York City, explored early shipwreck sites on the Florida Keys. Mendel L. Peterson, head of the National Museum's Department of History, participated in the expedition on the invitation of Dr. Crile. Three shipwrecks were explored. The first was tentatively identified as a British naval vessel which sank between 1720 and 1750; the second was a trading ship of unknown nationality engaged in the African trade; and the last was a large unidentified vessel which went down probably before 1675.

In June 1952 another expedition sponsored by E. A. Link continued exploration of the site of the British ship that had been investigated the year before. The previous winter this ship had been definitely identified as the frigate Looe, which sank on February 5, 1744. Subsequent research in the Public Record Office in London uncovered the story of the last cruise of this vessel under Capt. Ashby Utting. The Looe was cruising off the northern coast of Cuba during a period of warfare between Great Britain and Spain. On February 4, 1744, she sighted a sail and gave chase, capturing a ship which proved to be a Spanish merchantman. The Looe put a crew aboard the prize and started in a northeasterl course up the Florida channel toward her home port in South Carolina. Owing to a miscalculation of position, the frigate and prize ran aground on a coral key about 60 miles above Key West at 1:15 on the morning of February 5. Being unable to float his ship Captain Utting abandoned her, putting his men ashore on the key. As daybreak came, a sloop was seen cruising up the channel offshore. Surmising that she was Spanish, he sent out his longboat with a force of armed marines, who captured the sloop and brought her in. With this vessel and the boats of the Looe the entire company was able to escape, not a man being lost. In a general court martial in England Captain Utting was acquitted, no willful negligence being shown in the loss of his ship. Today, the key which was the graveyard of the British frigate is only a reef showing a coral head here and there at low tide, and the memory of the British man-of-war is preserved in the name "Looe Reef", which appears on modern charts of that area.

While detailed plans of future work on the Florida Keys do not extend beyond this year, it is expected that the program will continue to bring to light unknown and important incidents in the maritime history of the area which in reality formed the background of the commerce which was of so much importance to the economic health of the English-American Colonies to the north.

Changes in Roster:
Richard W. Weston, change Rt. I to Rt V.
Patrick Shannon, change Box 516 to Box 5165.
Capt. Elias R. Johanson, change zone to 23.
Ronald Roberts Moore, new address: 7924 Sterling Dr.,Oakland, Calif.
E. W. Jenkins, new address: 5794 Foulois Dr., Dayton 3, Ohio.
W. E. Sawley, change to Veterans Hospital, Tranquille, D. C.
Allan N. Saunders, 9550 S. E. 71st St., Mercer Island, Wash.
R. C. Shepherd, temporary new address: 125 Besford Rd., Gate Acres, Liverpool, Scotland

A YANKEE SHIP and a YANKEE CLIPPER
by Bill Adams

A thousand tons of clipper ship a-driving through the trades,
Within her holds a thousand tons of silk for Yankee maids,
And tea in case, and spice in cask. Her stunsails gleam like snow,
And from her deck the chorus roars of "Blow, my bullies, blow!"

She's made the China voyage again in nine and ninety days.
The porpoises make way for her, and where the sperm whale plays
And Bedford whalers turn to stare at seeing her sweep by,
They take her for a flying cloud that's fallen from the sky.
The Limejuice captains swear at her, to see her drifting past,
And pile the clouds of canvas high on every Clyde built mast.
She steals the trade from London town. The London merchants rave
To think of driving Yankee ships that rule the rolling wave.

Old Ocean Chief and Flying Cloud, and pitching Hurricane,
The Stag Hound, and the Challenger, and Chariot of Fame,
Are down in Davy's locker now. Out there by Anjer way
Are seen no dandy Yankee ships a-slipping past today.

There were no days like those brave days. They'll come now never more.
Creesy is dead, and Waterman, and Samuels sleeps ashore,
Donald MacKay is but a name, and beauty's dream is past.
The sea moss grows on rotted boom, and spar, and skysailmast.

But up and down far distant seas, when stars are clear and bright,
Where trade winds blow, and lonely whales go swimming down the night,
You'll find the ghosts of Yankee ships. It's there that I would be,
And up above, against the stars, that flag a-flying free.

Bill Adams

BILL ADAMS

Bill Adams died March 16th, 1953. "He sleeps ashore as does Samuels" way up in the little ghost mining town of Dutch Flat in the High Sierras, California. It matters not where Bill is buried, his kind and loving spirit is "out by Anjer way with the flag a-flying free". Bill was the winner of three Nobel prizes and many honors for his stories and poems of the sea. Because of an accident aboard ship, Bill could not continue his life at sea and he spent his remaining years writing about the sea. His work, his books leave a rich heritage to every member of the Guild. Bill "signed articles with the Guild" when we had nine members and we are proud that this old timer was a charter member. We have known Bill for many year; his letters were like sea stories. He was loving and kind to all and isn't it too bad that we never shook him by the hand.

In commemmoration of Bill Adams and all for which he stood, his sea books, and his sea stories, and the "old sail ships", it is proposed that the Nautical Research Guild establish an "Annual Bill Adams Award" to be given for the best maritime article or contribution, written by a member for publication in the Nautical Research Journal. The details of the prize and judges will be announced later.

NAUTICAL RESEARCH GUILD ★
Dedicated to the Era of Sail
SECRETARY'S MONTHLY LETTER
THE SECRETARY'S MONTHLY LETTER WAS ESTABLISHED IN 1949

The Nautical Research Journal is published by the members of the Nautical Research Guild, a non-profit organization.

The articles, drawings and sketches are contributed by Guild members and the only revenue is from the annual dues.

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ANNUAL DUES — $5.00

MEMBERSHIP CHAIRMAN	WILLIS L. NYE
3038 Bridge Street	Hayward, California

HARRY D. HAMILTON, SECRETARY-TREASURER 15004 EAST GRANADA AVE. WHITTIER, CALIFORNIA, U. S. A.

A BRIEF HISTORY OF THE ART OF NAVIGATION
By Louis Allen Harding, M.E.
New York: The William - Frederich Press, 1952. $3.75.

Reviewed by Associate Professor Wilson Heflin, U. S. Naval Academy.

This study has a good many virtues. It is one of the very few books in print which traces the development, through the ages, of navigational techniques. In the brief span of 142 pages, Mr. Harding has provided a wealth of information.He has approached his subject with the antiquarians interest in obscure facts and the engineers enthusiasm for trigometric exposition. Mr. Harding's explanations are succint and generally lucid, supplemented by attractive and helpful drawings and useful charts and tables. For me one of his major achievements is in dispelling the persistent assumption that captains of the past were unlearned fellows who somehow made their way across the seas "by guess and by God." In this age of fancy electronic navigational aids it is difficult to understand how very savvy the old sea captains were. For the model maker interested in ancient navigational instruments, the book contains directions for constructing the fore staff, the Davis back staff, and the astrolabe.

Mr. Harding's chief sources of information are navigating texts and manuals, many of them rare volumes. I wish he had supplemented his investigation by consulting old logbooks to be found, in many museums and libraries. Had he done so, I believe his emphasis would have been different. He would have found, for example, that the lunar observation, which he briefly dismisses, was much used aboard merchantmen, whalers, and men-of-war well into the nineteenth century.

Several errors in misprints are defects in an otherwise useful, attractive, and much needed volume. The Naval Academy has purchased the book.

(Note -- Mr. Harding is a charter member of the Nautical Research Guild)

QUERIES AND ANSWERS

Query No. 132 from Donald H. Clark, 4329 Semple St., Seattle, Wash. Schooner BACCHUS. Has any member a photo or sketch of this schooner which was engaged in the ice trade between Alaska and San Francisco for several years, taking her first voyage in 1852.

Query No. 133 from Louis A. Harding, 85 Cleveland Ave., Buffalo 9, New York. Please give me a description of a coach house and where located and how used on both a man-or-war and a merchantman? (Note: It must be that queries are answered direct. Answers and queries are not coming in to the secretary).

MEETING OF THE NEW YORK GROUP OF THE NAUTICAL RESEARCH GUILD

The regular meeting was held at the Seamen's Church Institute on Wednesday evening, February 25, 1953. The meeting started as usual with a delicious dinner, roast beef this time. We certainly owe a debt of gratitude to the Institute for providing us with such a fine place for our meetings and such excellent meals at a very reasonable price.

After dinner Gordon Grant showed us a model of a whaleboat he had made. This is a beautiful piece of work. Its scale, one inch to a foot, is large enough to permit a great deal of detail. It is constructed with ribs and planking, and is fully equipped with harpoons, lances, oars, tubs of lime, and all the other items found in a whaleboat, even including a sheath knife in the bow to be used to cut the line in an emergency. Mr. Grant gave an interesting talk on how he had made the model and then described the methods used in pursuing and catching whales. Mr. Johnson, who had served on a Scottish whaler added some remarks about his own experiences.

We then had a motion picture, "The Art and Craft of Sailmaking", lent by Ratsey and Lapthorn, the well known sailmaking company. This showed the whole process of making a sail from the initial laying out on the loft floor to the finished product. The methods and tools used are almost identical with those of a hundred or more years ago. The only major difference is in the use of sewing machines but these can be used satisfactorily only for sewing straight seams in light canvas. All the work on heavy sails and most of that on light sails is still done by hand.

Another item of interest was a model of the YOUNG AMERICA in a bottle by Mr. Johnson.

Those present were:

E. Sohier Bosley	Mr.&Mrs. John Johnson	Lewis Shafer
Michael Costagliola	Dr.&Mrs. Adolph Klein	John Shedd
George Dannenberg	A. G. Law	Frank W. Thober
Angela Geele	Douglas Miller	William Wilkinson
Gordon Grant	Howard Miller	Jay Williams
Ransom Hughes	Roy Rogers	

INTRODUCING NEW MEMBERS

Herbert R. Spencer -- The Erie Enameling Co., Erie, Pennsylvania. Mr. Spencer is the gentleman who entered Query No. 226, How was a knot divided? The six answers to this query were mailed to Mr. Spencer who has since joined our ranks. His letter is very interesting and is in part: "Perhaps my only claim to fame is the fact that at one time I owned a battleship. She was the USS Michigan (Wolverine), which I bought from the Navy Department in the hope that we could restore her. This proved impossible, and in 1949 we scrapped her and have erected the bow as a permanent monument." Mr. Spencer's special nautical interests are what one would expect -- "Early methods of navigation, celestial and and piloting and the instruments used". Also he asks, "I wonder if anyone else in this country is using a barocyclonometer"? Personally, we cannot answer this question but Louis A. Harding of Buffalo can.

Leonard A. Covell, Marydel, Delaware. " My father and most of my male ancestors followed the sea. My first job when I was 8 or 9 was on Saturdays "passing the ball" for rigger on an auxiliary schooner at Honolulu. I started going to sea when I was 11 as cadet seaman; signed on for a trip to Europe from Portland, Oregon. That lasted a year. After that I went to sea every summer until I entered college, but generally on ships which my father did not command because I found being the skipper's son could be a liability. I like to look at ships, read about ships and talk about them". Mr. A. Maury Morris, Jr. (NRG) presented Mr. Covell with a Guild membership.

Carl M. J. von Zielinski, 2715 -- 79th Ave.S.E., Washington 28, D. C. Mr. von Zielinski's application says that he is interested in square-rigged sailing ships of the Navy and Merchant Marine. That's all he says, but from cards, booklets and clippings, we learn that Mr. von Zielinski is a model maker. And he is not the usual "run of the shad modeler" - no sir, his models are of the CONSTITUTION and the GUERRIERE -- but not built for the mantlepiece. They are 26 to 40 feet in length - square rigged with courses,

topsails, topgallants, and royals. The bowsprit on his CONSTITUTION has the steeve of the old ship. A battle was staged between the CONSTITUTION and the GUERRIERE in Washington's famous tidal basin. Commands were barked and guns boomed. Both ships were manned by crews of six sailors -- the CONSTITUTION is 28 feet and the GUERRIERE 26 feet long. This mock battle was staged in connection with the President's Cup Regatta and was part of the celebration honoring the 150 anniversary of the founding of Washington. We have asked Mr. von Zielinski to tell us the story of these ships and others he has constructed like them.

Joseph F. Kostalik, 2126 Agra, Bell Gardens, California. "I am a ship model enthusiast, and am very interested in nautical research. I am now looking up information on the whaler LAGODA and need some help on a few details.

Albert R. Hirst, 807 Milton Street, New Westminster, British Columbia. In his application, we read -- "All things nautical especially the period from 1600 to 1860". In his fine letter he says: "A frigate is my next modeling project. I want to build up my modeling experience now to help me to do a good job on either the ROYAL WILLIAM or the ROYAL SOVERIGN"and he says he has a weakness for the ESSEX. We welcome another member from Canada. And - Fred Williams - here is another member for your Vancouver Group of the Guild.

Edward L. Henshaw, 1718 Austin Way, Santa Rosa, California. Captain Leighton Robinson, President of the San Francisco Group of the Guild interested Mr. Henshaw. Mr. Henshaw's interests are Ship Model Making, Small Boat Sailing, Nautical History,

Roger Weare Bragdon, Meadowview Ave., Hewlett, New York. Mr. Bragdon starts his application with this positive statement: "First an observation- I am still a Maine man wherever I happen to go. Home is York. My nautical interests are purely sentimental. My interest in old sail I have from my father and from Captain George Thomas of the KLINK, who used to fashion schooner or half rigged brig weather vanes when he boarded with the family. Father still likes to recall the last launching in Wells, and the days when he could count thirty-odd sail in the bay off that town. Together we have chased to Portland, Portsmouth, Wiscasset, Boothbay and New York to see the bark ABRAHAM RYDBERG, the schooner ALBERT F. PAUL and HERBERT L. RAWDING, and the ship BENJAMIN F. PACKARD, the hulk CARIOLANUS, and some others. We have photos of these vessels - Where my father's library leaves off mine now keeps on going. My favorite author is Underhill." Mr. Bragdon's book "Down Easter" - Building a Model of the Benjamin F. Packard. Building of the model of the Packard which is described in detail with illustrations and sketches and the story of the "Down Easters" - the wooden ships built down Maine and Nova Scotia way which the Journal will review later.

Mr. and Mrs. William F. Burch, 1019 East Erna Ave., La Habra, California. Mr. and Mrs. Burch are interested in the old ships, nautical history, and exploration by sea. Mr. Burch is the Ford dealer in a town neighboring to the Guild Headquarters. Mrs. Burch is a free lance commercial artist and a housewife who is interested in marine painting.

The applications have not been returned from the following three members who will be introduced to the members later.

Rex A. Ferguson, 1142 23rd Street, Santa Monica, California
D. W. Austett, Powernail Company, 961 West Montana, Chicago 14, Illinois
Donald Matz, 338 Mass. St., Reading, Pa.

Notice from the Secretary -

We have reserved a little space to tell the thoughless and careless members that dues are due in January. The Journal has been delivered to all hands since January. We have made allowances for you. You have meant to send them but have forgotten to do so. This request does not apply to those who have written that their dues would come later, it is directed to you who have forgotten and who have not written that your dues would come later.

His Majesty's Armed Schooner

SULTANA

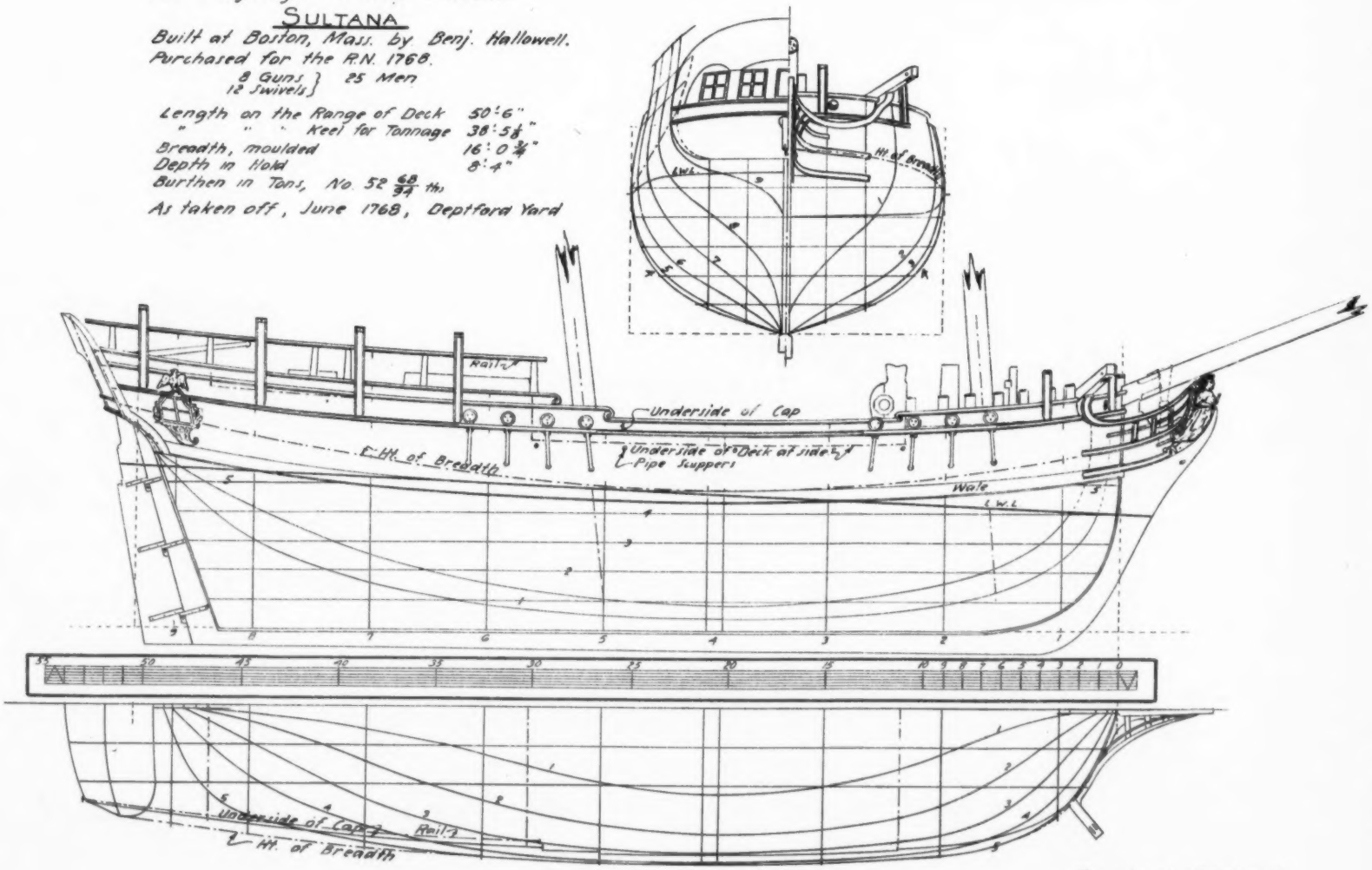
Built at Boston, Mass. by Benj. Hallowell.
Purchased for the R.N. 1768.

8 Guns } 25 Men
12 Swivels }

Length on the Range of Deck	50'-6"
" " " Keel for Tonnage	38'-5⅛"
Breadth, moulded	16'-0¾"
Depth in Hold	8'-4"

Burthen in Tons, No. 52 68/94 th.

As taken off, June 1768, Deptford Yard

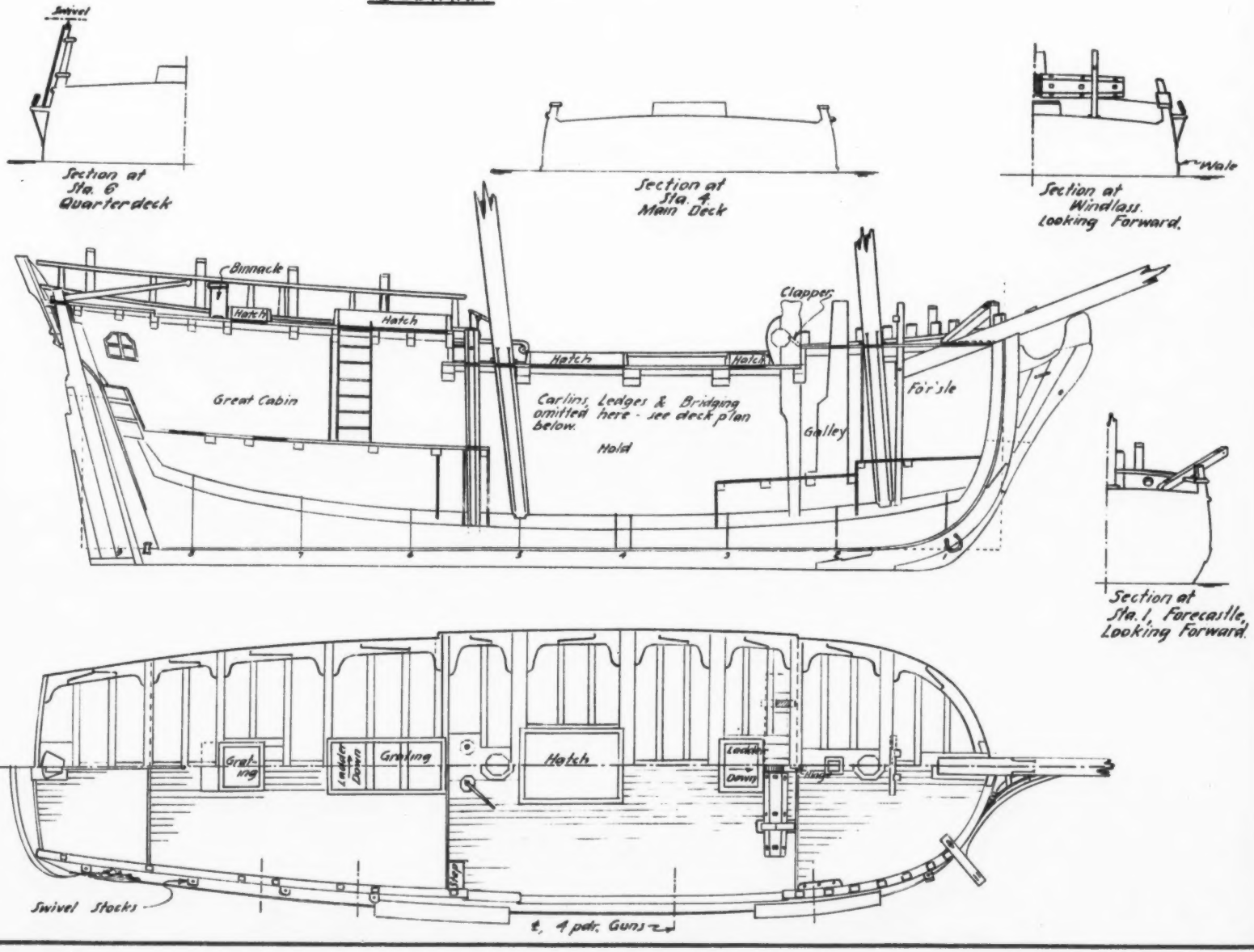


Lines shown to inside of plank.

Figurehead- Full-length Woman, – removed by Royal Navy

His Majesty's Armed Schooner

SULTANA



THE SULTANA
Lines from Howard I. Chapelle

This schooner was built at Boston. The first mention I have of her is in the Boston Gazette -- August 10, 1767 - "For London, to Sail Thursday Next, the Schooner Sultana, Samuel Roberts, Master, now lying at Pecks Wharf, near Mr. Hallowell's Shipyard."

November 14, 1768 (Monday) Boston Gazette - "Monday last arrived here the Sultana Schooner with dispatches for His Excellency the Governor and for the Commander of His Majesty's Forces in North America -- The Sultana is the vessel built here by Benjamin Hallowell, Esq.; and went home some months since. We hear she is now employed in His Majesty's Service in these parts".

In November 21, 1768, The Gazette lists her as anchored in Boston Harbor. Hallowell died sometime before March 1, 1773 as the Boston Evening Post has a notice to creditors to apply to John Peck (the early American naval architect) and a notice is included of the pending sale of his shipyard and stock along with a rope-walk.

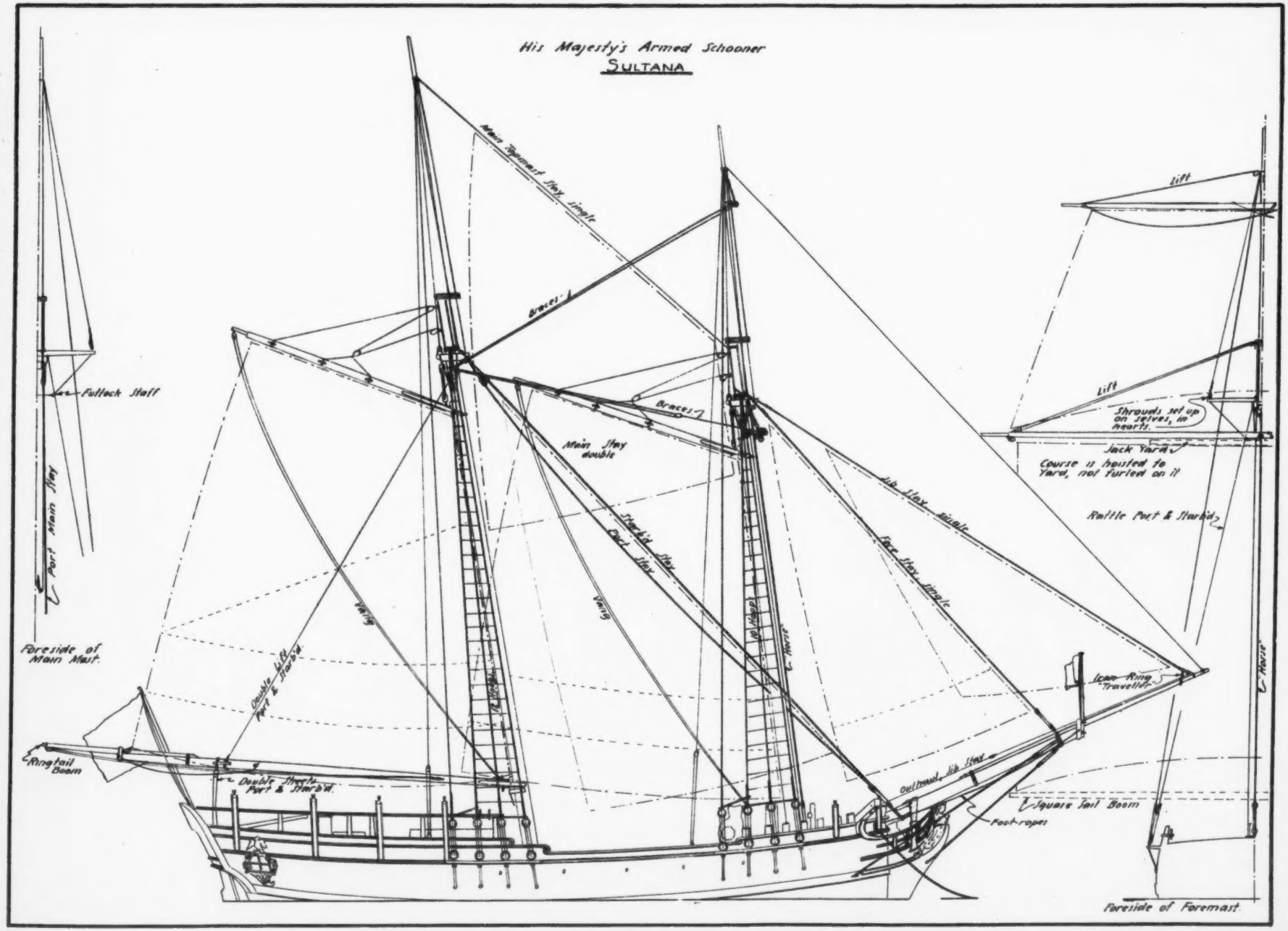
I take it she was built somewhere around 1766-67, probably that winter and was sent to England before purchase by the Royal Navy. It looks as though she may have been purchased while in England to carry dispatches to Boston. I dare say her complete record is in the Public Records Office in London.

She is the same size as HALIFAX and other American built schooners and I suppose they represent the sea going trader type of the period which may have been little different from the Marblehead schooners of the period. However, I should suppose the SULTANA and her relatives to be somewhat better finished than would be usual in the fishing vessels built for that business. About all I know of the Marblehead schooners in this period is that they were often fast, sharp and one had a seahorse head; they were used as privateers and cruisers when the French got hold of one.

We see that SULTANA was sailing for London as a sea going vessel before being taken over by the Royal Navy and surely she represented that class which not only went to Europe but to the West Indies, 1745-75. I suppose the SULTANA would sail pretty well -- there is nothing in the SULTANA'S lines that would make her a complete slug under sail. She had plenty of sail to make her go. She is a good example of her type and I used the proportions of CHALEUR'S spars to reconstruct SULTANA'S. If anything I have shown a little less sail, perhaps, than she may have had. These vessels were heavily canvassed; I have dimensions of the spars of a 60' Virginia sloop that shows she was about 140' from the tip of the jibboom to the end of the main boom.

THE SULTANA
A Prevue for Guild Modelers

We are very grateful to John Shedd for the opportunity to present this prevue of a kit which will be issued in the fall. The many ship modelers of the Guild will have pleasure in the study and appreciation of this beautiful old craft as shown by the drawings of Howard I. Chapelle. This pre-Revolutionary vessel built in the yards of Benjamin Hallowell 1766-1767 in the Bay Colony-Boston will bring many favorable comments, and please give them to John Shedd, 476 Main Street, Fort Lee, New Jersey.


His Majesty's Armed Schooner
SULTANA
Main Topmast Stay single
Braces
Braces
Main Stay double
Lift
Lift
Shrouds set up on selves, in hearts.
Jack Yard
Course is hoisted to Yard, not furled on it
Rattle Port & Starbd
Jib Stay single
Fore Stay single
Topsail Stay
Fore Stay
Vang
Vang
Pullock Staff
Main Mast Port
Foreside of Main Mast.
Double Lift Port & Starbd
Double Shrouds Port & Starbd
Ringtail Boom
Outhaul Jib Stay
Square Sail Boom
Foot-ropes
Iron Ring Traveller
Horse
Foreside of Foremast.